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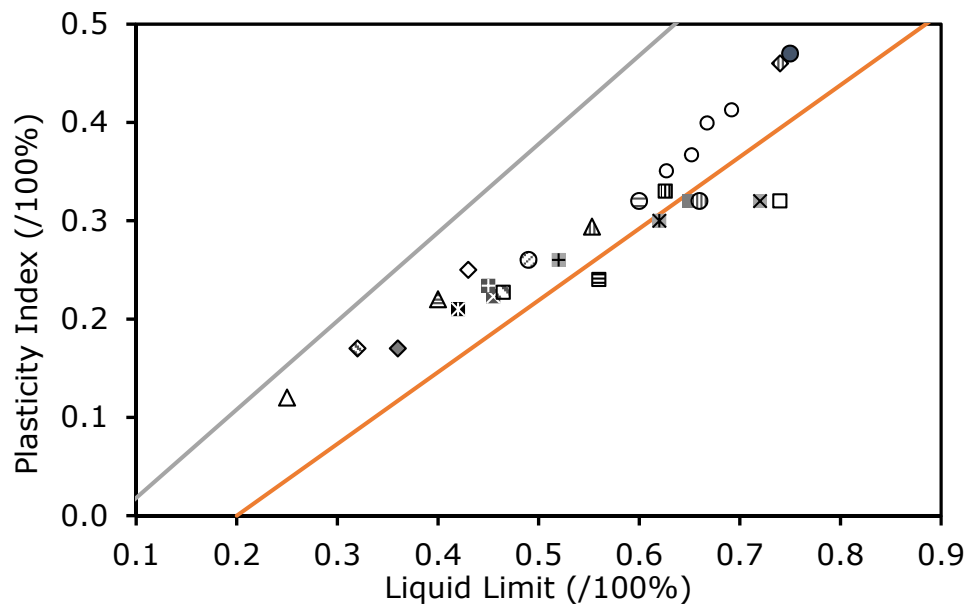
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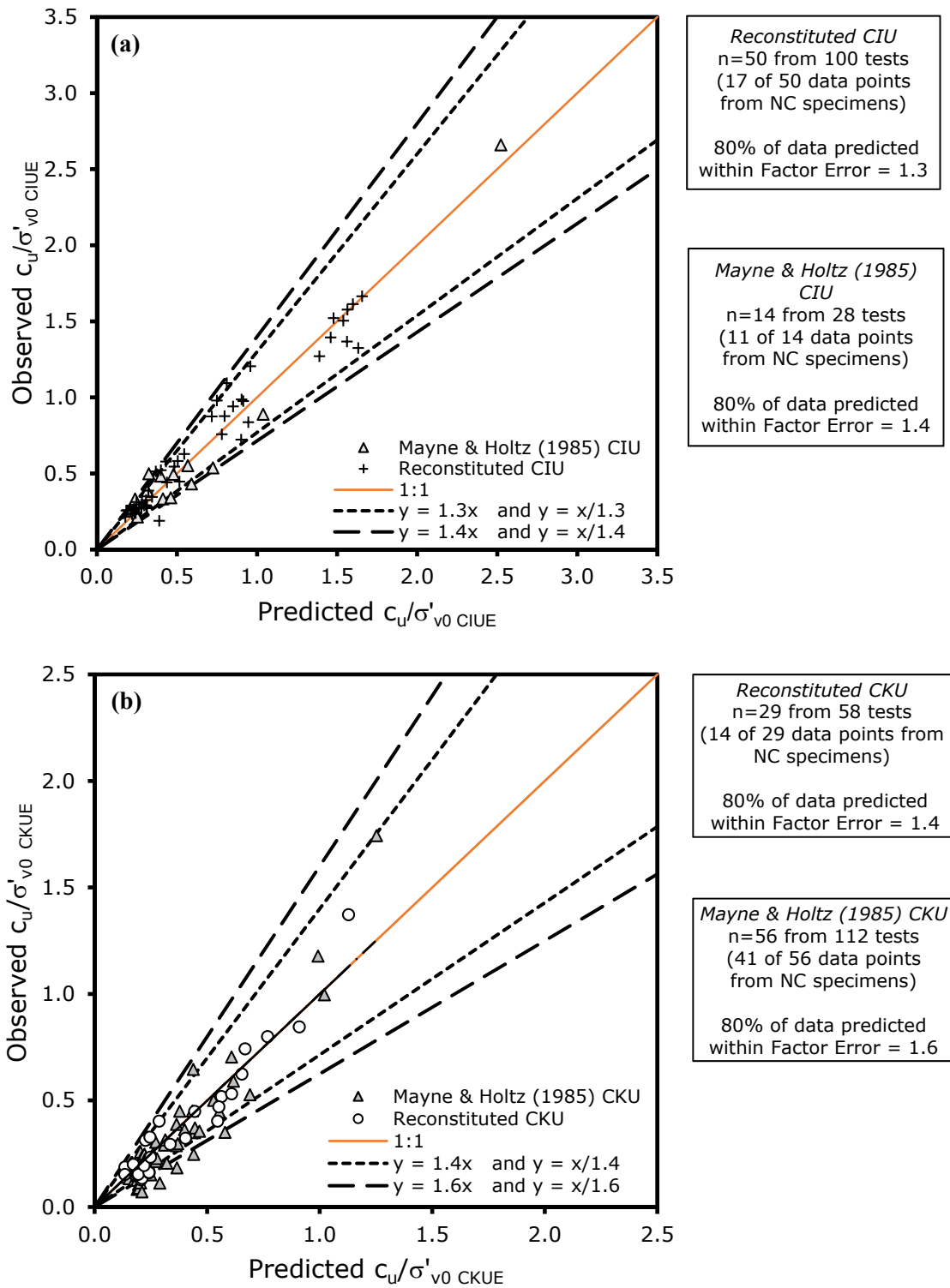
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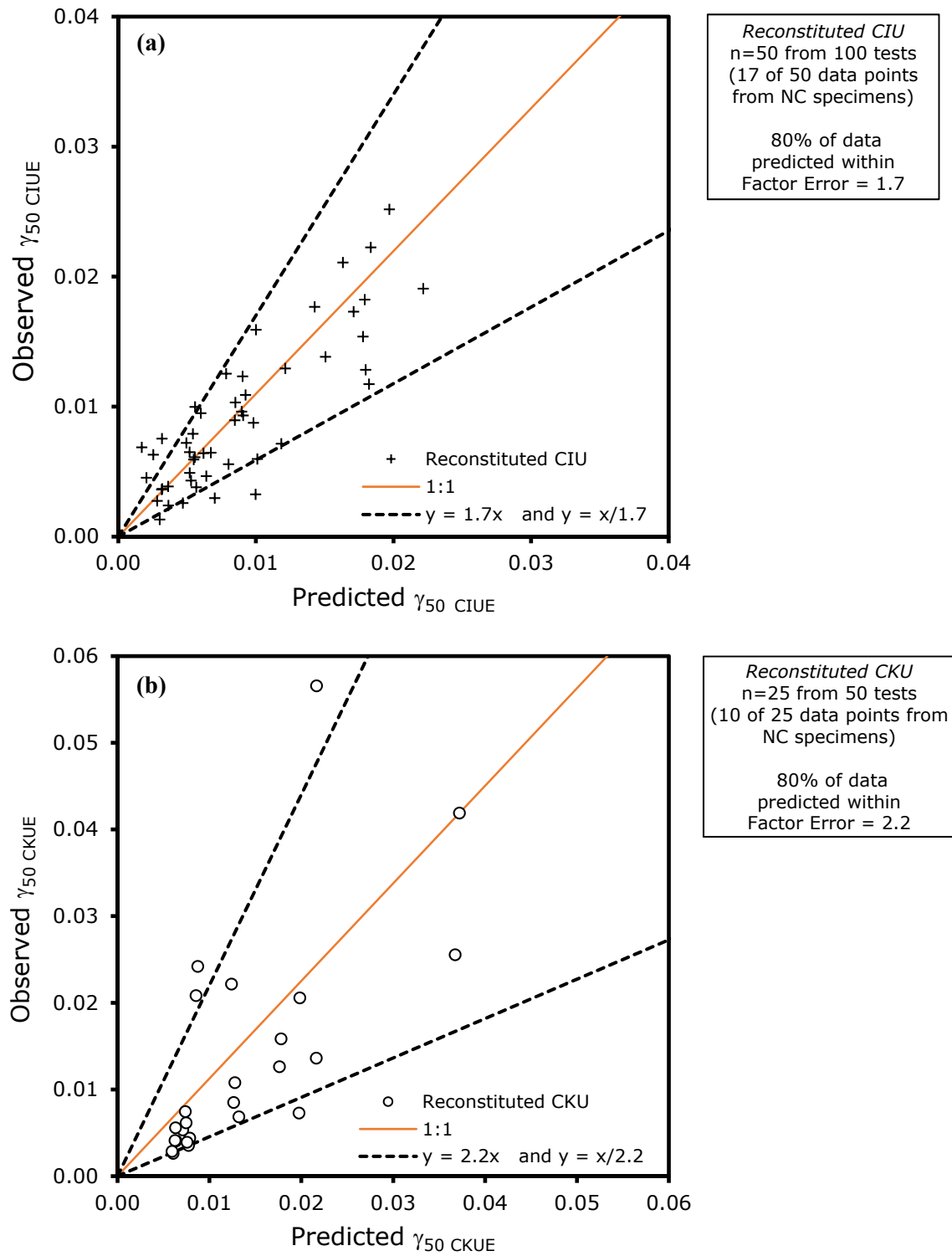
**Figure S1.** Soils in the database plotted on the Casagrande Chart (A-line (orange) and U-line (grey) shown)



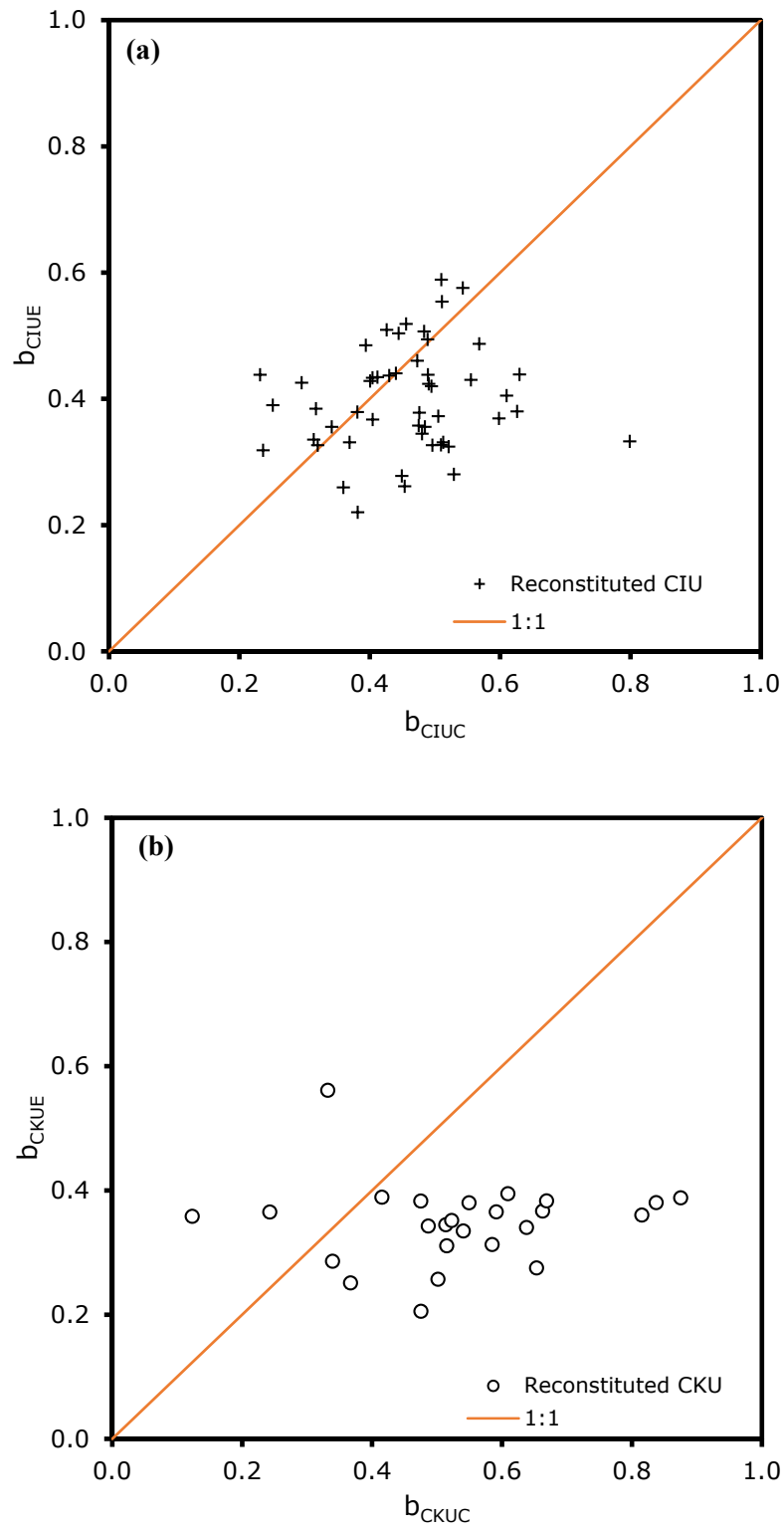
**Figure S2.** Comparison of observed and predicted values of  $c_u/\sigma'_{v0}$  CIUE and  $c_u/\sigma'_{v0}$  CKUE predicted from a triaxial compression test: **(a)** CIU triaxial tests and **(b)** CKU triaxial tests

**Reference:**

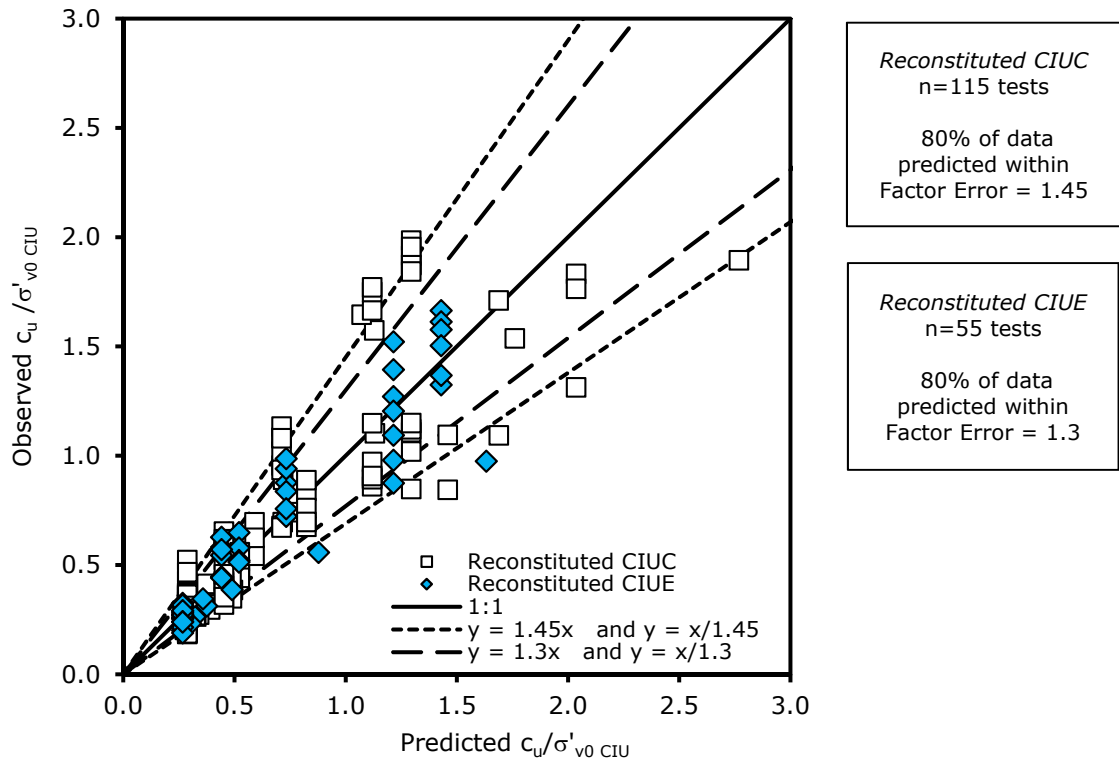
Mayne, P. W. and Holtz, R. D., 1985. "Effect of principal stress rotation on clay strength". In: *Proceedings of the 11th International Conference on Soil Mechanics and Foundation Engineering, San Francisco/ 12-16 August 1985*, (Publications Committee of XI ICSMFE, Eds.) A.A. Balkema, Rotterdam, Netherlands, vol. 2, pp. 579-582.



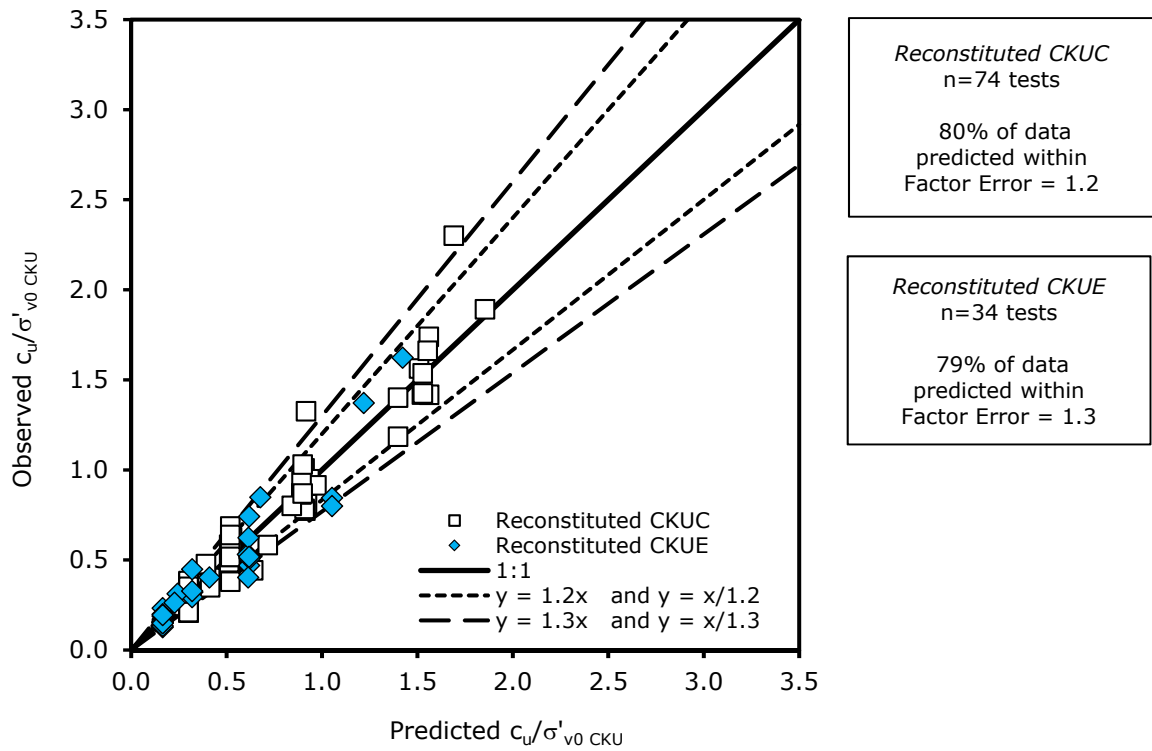
**Figure S3.** Comparison of observed and predicted values of  $\gamma_{50 \text{ CIUE}}$  and  $\gamma_{50 \text{ CKUE}}$  predicted from a triaxial compression test: **(a)** CIU triaxial tests and **(b)** CKU triaxial tests



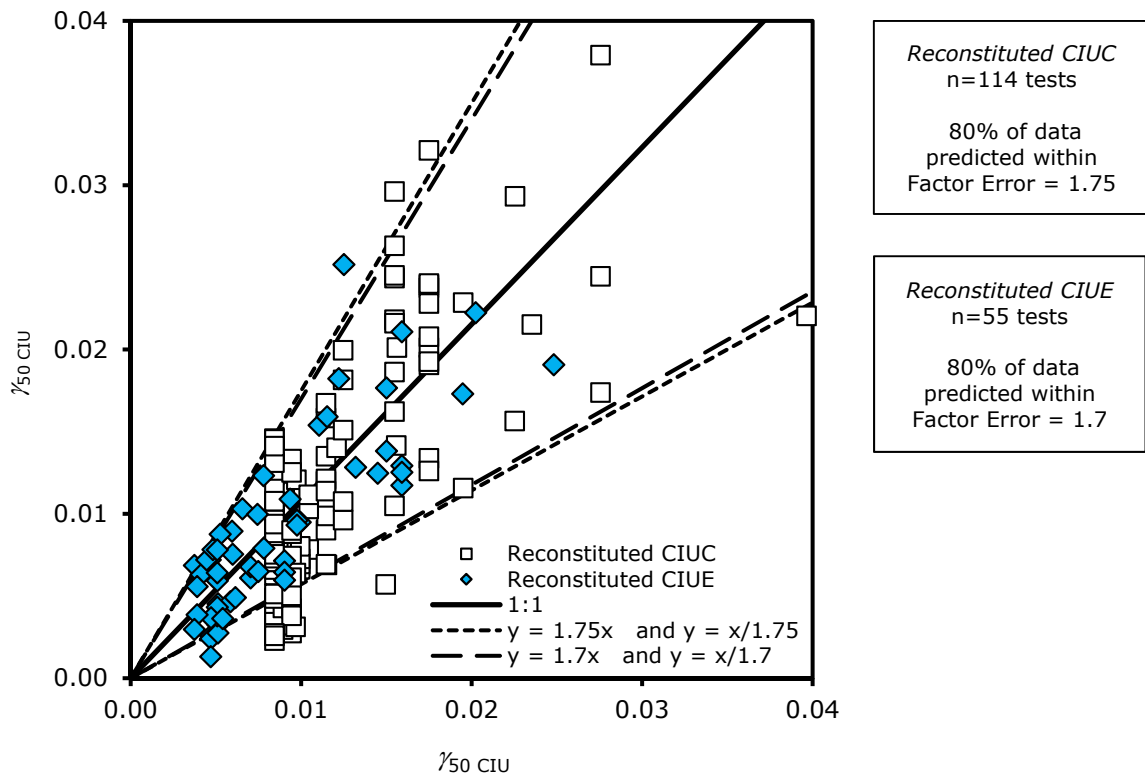
**Figure S4.** Comparison of non-linearity parameter in extension and compression **(a)** for CIU tests and **(b)** for CKU tests



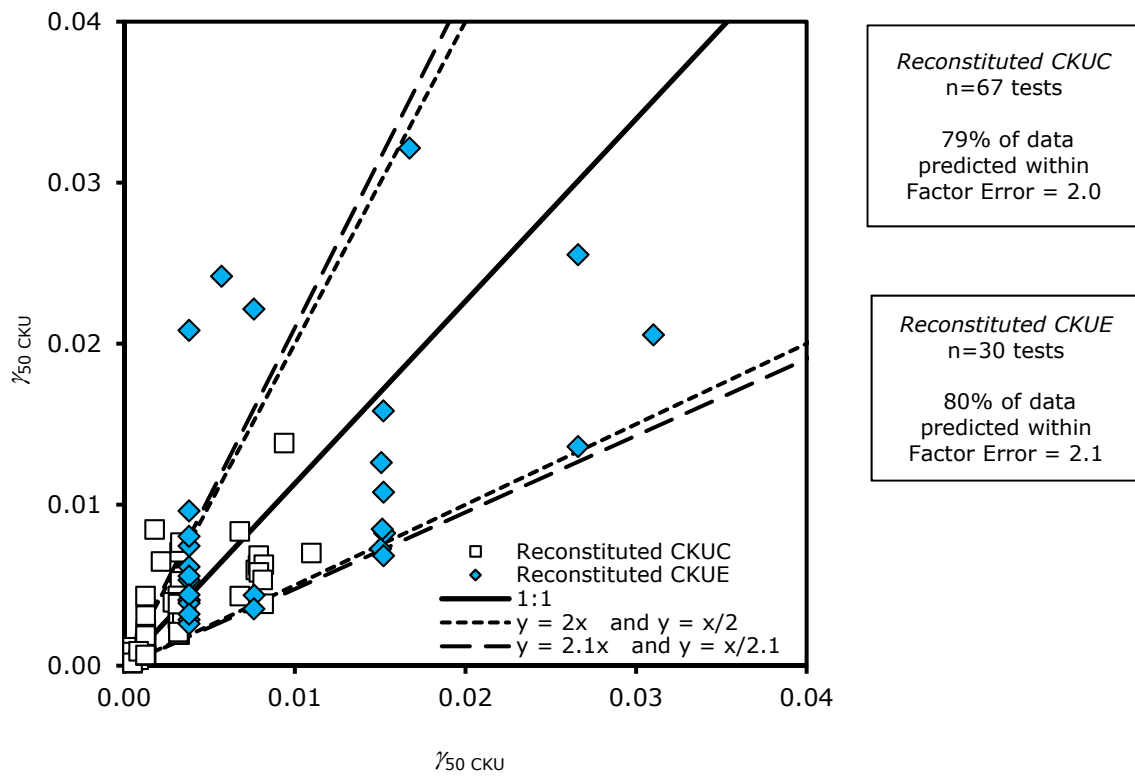
**Figure S5.** Comparison of observed and predicted values of  $c_u/\sigma'_{v0\ CIU}$  (Equations 9 and 10) tested by CIUC or CIUE



**Figure S6.** Comparison of observed and predicted values of  $c_u/\sigma'_{v0\ CKU}$  (Equations 11 and 12) tested by CKUC or CKUE



**Figure S7.** Comparison of observed and predicted values of  $\gamma_{50\text{ CIU}}$  (Equations 5 and 6) tested by CIUC or CIUE



**Figure S8.** Comparison of observed and predicted values of  $\gamma_{50\text{ CKU}}$  (Equations 7 and 8) tested by CKUC or CKUE